

**EXCERPT FROM: NATIONAL PLANT MATERIALS PROGRAM STRATEGIC PLAN,
AUGUST 2005, REVISED FEBRUARY 2006**

Plant Materials Program Strategic Goals and Objectives

The Plant Materials Program has established Goals to address the Mission and Management Goals of the National Strategic Plan. These include:

Mission Goals

Foundation Goals

- High Quality, Productive Soils
- Clean and Abundant Water
- Healthy Plant and Animal Communities

Venture Goals

- Clean Air
- Energy Conservation and Production
- Land Fragmentation

Management Goals

- Managing Human Capital

Strategic Goal 1 – Identify and evaluate plants and develop technology for their successful establishment and maintenance to solve natural resource conservation problems which include improving air and water quality as well as enhancing wildlife resources.

Plant solutions to natural resource problems help farmers, ranchers, and forest landowners meet the increasing level of environmental stewardship the public demands. Historically, plants have provided a major part of the solution to many of the severe environmental problems faced by our Nation. As the scope of environmental concerns has expanded, a wider range of plant solutions are now needed to address these concerns.

Objective 1.1 - Conserve and enhance soil resources with plant science technology.

While excess erosion has been reduced using improved plants and vegetative management strategies, persistent and new soil resource concerns require new conservation efforts. The biological, chemical, and physical processes that occur in soils are important drivers of a productive agriculture. These processes cannot be simply bypassed with other inputs.

Soil degradation is not just the loss of soil through soil erosion. Biological, chemical and physical processes can be interrupted even while the soil stays in place, through means such as compaction, crusting, salinization, or loss of organic matter. Plants play an important role in improving soil organic matter and sequestering carbon.

The challenge is to maintain the Nation's soil resources as a means to achieve multiple resource protection benefits, including reduced runoff and erosion, increased carbon sequestration, and improved productivity and sustainability. Maintaining and enhancing the Nation's soil resources on a watershed scale will require a proactive development and application of plant materials releases and technology. The objective addresses the NRCS Strategic Plan Mission Goal: High Quality, Productive Soils.

Baseline

Erosion control and reclamation/restoration on private and public lands continue to be a high priority resource need on cropland, forestland, rangeland, mining land, along highways, stream systems and coastlines, and in

areas impacted by natural disasters such as wildfires and hurricanes. There are an estimated 106.4 million acres of land where conservation and erosion control measures are needed annually. The Plant Materials Program currently supports NRCS efforts to protect or improve the health of 4.87 million acres of lands subject to excessive erosion annually (PRS data, 2003). The use of selected or site-specific adapted plants, and appropriate plant technology will play a key role in controlling erosion on these lands, with the added benefits of improving agricultural land health and reducing the invasion of noxious and invasive weeds on disturbed lands.

The responses from Plant Materials Program customer survey (2004) showed recurring opportunities for the Plant Materials Program to accelerate work in developing and transferring soil organic matter technology, accelerate sediment and nutrient management technology, accelerate release of native plants and legumes, and accelerate development of technology in carbon sequestration.

Performance Goal

The Plant Materials Program will maintain foundation seed stocks and continue to improve technologies for existing plants. It will also select new plant species and technologies with the capacity to improve organic matter levels, reduce erosion and improve reclamation/revegetation efforts on 5.2 million acres annually by 2010. The Program will develop a procedure for on-farm research through the Conservation Security Program to increase the technology needed to assure high quality, productive soils.

Objective 1.2 - Improve water quality and quantity with plant science technology.

All land management activities can be the source of sediments, nutrients, organic matter, chemicals, and pathogens in the Nation's surface streams, lakes, estuaries and ground water; and ultimately, marine waters. Sediment has been recognized as the largest contributor to degraded water quality. In addition, nutrients and chemicals applied in agricultural systems and urban landscapes may reach water sources through runoff and by leaching through the soil profile to contaminate ground water. Plant materials and technical assistance can significantly reduce nutrient, chemical and sediment runoff from agricultural lands (e.g., cropland, forest land, grazing land, confined livestock areas and urban landscapes).

In all regions, demand for water is out growing the available water supply. The Plant Materials Program, with conservation partners, can help farmers, ranchers, and other land managers reduce water usage on agricultural and urban lands thus providing some regulatory and drought relief for those who must conserve use. The objective addresses the NRCS Mission Goal: Clean and Abundant Water.

Baseline

Water quality in wetlands, streams, and lakes affects human health as well as habitat and health for domestic animals and aquatic and terrestrial wildlife species. NRCS estimates that vegetative treatment on more than 46 million acres is needed to control nearly all of the Nation's soil erosion that affects surface waters. Improvement of vegetation in wetlands, riparian areas and urban areas through the establishment of vegetative buffers and bio-filters (e.g., grass waterways, riparian buffers, urban runoff bio-filter systems) are critical to improving water quality through planning at the watershed scale. The Plant Materials Program supports NRCS efforts to protect or enhance 7.1 million acres annually to improve water quality (PRS data, 2003).

The responses from Plant Materials Program customer survey (2004) showed recurring opportunities for the Plant Materials Program to accelerate water quality related work in native plant releases, accelerate sediment and nutrient management technology, accelerate technology in noxious and invasive weed suppression and revegetation, select better grazing plants, and develop technology to improvement stand establishment.

Performance Goal

The Plant Materials Program will maintain foundation seed stocks; will continue to improve technologies for existing plants; and will continue to select new plant species and technologies to treat a minimum of 7.6 million watershed acres annually by 2010.

The Plant Materials Program shall emphasize the study and release of plants to mitigate the effects of severe drought and flooding.

The Plant Materials Program will collaborate with USDA-ARS and university researchers to select plants and develop plant technology to improve nutrient uptake.

Objective 1.3 - Improve air quality with plant science technology.

Odors, particulates, and greenhouse gas emissions generated through agricultural activities such as the use of nitrogen fertilizers and on-farm fuels, as well as animal wastes, degrade air quality. As urbanization encroaches on agricultural lands, communities at the rural/urban interface are becoming more sensitive to these issues. The objective addresses the NRCS Strategic Plan Mission Goal: Clean Air.

Baseline

The challenge is to identify and implement low-cost opportunities to reduce odor-laden particulates, and greenhouse emissions from agricultural sources.

Performance Goal

Plants and plant technology will be identified and developed to provide soil vegetative cover to filter airborne pollutants and reduce greenhouse gases through the storage of carbon in plant tissues and soil organic matter.

Objective 1.4 - Enhance fish and wildlife resources with plant science technology.

A healthy landscape provides critical habitat (food, water, and shelter) to a diversity of wildlife and aquatic species. Improvements to the landscape - including wetlands, streams, grasslands, range lands, floodplains, and forest lands – create ecosystems that can support wildlife and aquatic species while still allowing the land to be productive to the land manager. The use of plants to improve habitats has helped significantly in the past several years, and has yielded substantial benefits for fish and wildlife, as well as the environment in general. This objective addresses the NRCS Strategic Plan Mission Goal: Healthy Plant and Animal Communities.

Baseline

There are many opportunities to introduce wildlife components or practices into conservation plans and contracts. Likewise, responses from Plant Materials Program customer survey (2004) showed recurring opportunities for the Program to accelerate work in habitat restoration technology.

Performance Goal

The Plant Materials Program will emphasize the selection and release of plants and the development & transfer of associated plant technology to improve fish and wildlife habitat on 100% of the acreage contracted by the NRCS for improvement. Increased use of plants and plant technology important to wildlife and aquatic species will help restore habitats and enhance populations on 4.5 million acres annually by 2010.

Strategic Goal 2 - Provide plant materials and plant technology that are economically feasible for solving conservation problems.

Conservation plant species and plant technology are used to address a wide variety of natural resource conservation needs throughout the Nation. Plants offer a natural solution for stabilizing soil, improving water quality, and providing food for livestock and improving habitat for wildlife. To provide market based incentives and for use in conservation systems, plant materials must be affordable as well as readily available. The technology used to establish and maintain plants in conservation systems must be readily applicable and tailored to field-level use.

Objective 2.1 - Provide for and promote the commercial production of NRCS plant releases to ensure that adequate seed and plants are available to meet conservation needs.

The production of high-quality seed and plants by Plant Materials Centers is an important part of the process of delivering plants and technology for use in conservation. Seeds and plants are made available to commercial growers for large-scale production. Landowners and land managers purchase NRCS plant releases from commercial growers for use in reclamation work and for vegetating millions of acres that address their resource conservation and production objectives.

The relationship between the Plant Materials Program and commercial growers facilitates the rapid and affordable production of seeds and plants to meet user demand. With this system in place to provide plant solutions, commercial production of Plant Materials Program conservation plants will adequately meet anticipated needs in conservation programs. This objective addresses the NRCS Strategic Plan Mission Goal: Healthy Plant and Animal Communities.

Baseline

For over 65 years, the Plant Materials Program has selected plants to meet critical conservation needs. The success of conservation work in the United States is based on the distribution of high-quality seed, plants, and technical information from the Plant Materials Program.

Performance Goal

The Plant Materials Program will expedite the evaluation and release of native plants to solve identified resource concerns in the most efficient and economically feasible manner. Plant Materials Centers will ensure that foundation seed or plants of all currently active conservation plant releases are maintained in sufficient quantities so that it is available to growers for large-scale production.

Objective 2.2 - Maintain and improve the productivity of agricultural lands through plants and plant management technology.

Healthy plant and animal communities resist degradation when beset by natural disasters such as flooding and drought and can quickly recover their beneficial functions. They combat invasive species and respond efficiently and quickly to energy inputs to achieve enhanced yields. Educational and technical assistance entails providing data on appropriate plant species as well as disseminating information on ways to use the data and how to apply sustainable production techniques. Well-planned conservation practices that use appropriate plants and plant management are a good insurance against drought, pests and diseases, invasive species and result in improved yields. The objective addresses the NRCS Strategic Plan Mission Goal: Healthy Plant and Animal Communities.

Baseline

There are about 588 million acres of rangeland and pastureland on private lands in the United States. About 60 percent (355 million acres) are considered below the desired quality for grazing and do not meet the needs of wildlife (NRCS NRI, 1997). Through the use of selected plants and plant technology developed by the Plant Materials Program, the productivity of these lands can be improved while providing ecological benefits. In 2003, the Plant Materials Program impacted 3.7 million acres of grazing land improved through NRCS conservation practices (as measured through PRS data).

Performance Goals

The Plant Materials Program will maintain foundation seed stocks, continue to improve technologies for existing PMC plants, and will select new plant species and technologies to improve grazing conditions on 4.0 million acres annually by 2010.

Baseline

There are about 100 million acres of cropland in the United States that are considered below the desired quality. (NRCS NRI, 2001). Through the use of selected plants and plant technology developed by the Plant Materials Program, the productivity of these lands can be improved while providing ecological benefits. In 2003, the Plant Materials Program impacted 2.6 million acres of cropland through NRCS conservation practices (as measured through PRS data).

Performance Goals

The Plant Materials Program will maintain foundation seed stocks, continue to improve technologies for existing PMC plants, and will select new plant species and technologies to improve cropland conditions in excess of 2.8 million acres annually by 2010.

Objective 2.3 – Increase the alternative uses and specialized uses of conservation plant releases to meet emerging needs.

The recent increases in energy prices faced by producers throughout the country emphasize the need to find new ways to improve the energy efficiency of U.S. agriculture. In the future, the challenge will be to improve energy efficiency in ways that maintain the productive capacity of the land while benefiting the environment. Development of more efficient machinery and selection of new plant varieties can improve energy efficiency. While bio-energy and bio-products can help replace fossil fuels, the challenge is to overcome the barriers to economic feasibility and ensure that the production of energy raw materials is environmentally beneficial at the farm level. There are opportunities to increase the use of conservation plants and plant residues in the conversion to various forms of energy and bio-products.

There are many opportunities to integrate existing and new conservation plant releases into the ornamental horticulture industry. Many of the plants selected for conservation attributes also have aesthetic and low-maintenance characteristics, such as for low water-usage. There is an economic potential for the landscape and ornamental nursery industry to increase and market Plant Materials Program conservation plants and plant technology as a healthy way to improve both the agricultural and urban landscape.

There are opportunities to reintroduce and/or enhance native plants (especially endangered plants) in settings where invasive and noxious weeds have proliferated. Revegetation is a critical step in effective invasive and noxious weed management. The public generally prefers native plants in these settings and the Plant Materials Program has the potential to create native plant technology that is appropriate for revegetating weed infested land. This objective addresses the NRCS Strategic Plan Mission Goals: An Adequate Energy Supply and Healthy Plant and Animal Communities.

Baseline

Customers responded to the Plant Materials Program Strategic Plan Survey (Dec. 2004). Each customer was provided the opportunity to list their opinion on top three major activities that the Plant Materials Program should undertake. Customers identified the need for work on invasive species as a major activity. In addition, customers identified biofuels as a needed major activity. Other customers identified developing plants and plant technology that would thrive under drought conditions. Other respondents requested benefits to threatened and endangered species.

Performance Goals

The Plant Materials Program will collaborate with external agencies to develop bio-energy technology and determine the feasibility of using existing stands of invasive species as fuel.

The Plant Materials Program will identify and promote multiple uses for conservation plants such as native plants, especially plants that mitigate invasive species, plants that benefit species of concern, and plants that will thrive under drought conditions.

Strategic Goal 3 - Provide equal access for all Americans to the Plant Materials Program.

The Plant Materials Program has the potential to provide a wealth of information to landowners, land managers, and the public on the use and management of conservation plant species for the protection of the Nation's natural resources. It is important that the Plant Materials Program investigate a number of different delivery methods for the transfer and dissemination of plant materials information.

Objective 3.1 –Deliver products and services fairly and equitably.

It is the goal of NRCS and the Plant Materials Program to ensure that all people looking for information on conservation plants and plant technology are able to find it and use it. This objective addresses the NRCS Strategic Plan Management Goal: Managing Human Capital.

Baseline

It is imperative that technical information developed by the Plant Materials Program be available through a variety of means to ensure that NRCS staff and conservation partners have the tools they need to address resource conservation problems.

Performance Goal

The Plant Materials Program shall develop an Outreach Plan to ensure that its products and services are being provided fairly and equitably to internal and external customers by 2007.

Objective 3.2 – Promote the Products of the Plant Materials Program through an effective marketing and program delivery

Increasing visibility and effective marketing are the best vehicles to promote the Plant Materials Program. This objective addresses the NRCS Strategic Plan Management Goal: Managing Human Capital.

Baseline

The Plant Materials Program has utilized a Public Affairs Specialist (PAS) with excellent results. The creation of an electronic newsletter sent through a list serve and the production a new program video increased the awareness of the program, as evidenced through increases in web site traffic and personal feedback. The increased exposure and awareness of the program improves people's ability to locate information to improve conservation efforts.

Performance Goal

The Plant Materials Program will carry out an aggressive marketing and public information effort in order to maximize awareness of the program and ensure that potential users know what information is available from the program. The Plant Materials website will be the focal point of information and technology delivery so that anyone can get plant information at anytime.

Objective 3.3 - Increased use of plant materials to address human health, safety, cultural, and aesthetic issues.

By expanding the role of conservation plants, the Plant Materials Program will be instrumental in solving resource problems while also addressing human concerns such as public safety, health, cultural and aesthetic issues. This objective addresses the NRCS Strategic Plan Management Goal: Managing Human Capital.

Baseline

Historically the Plant Materials Program has focused on the use of plants and plant technology to solve natural resource concerns. However, many of the plants and much of the technology developed can be employed for other purposes. For example, the use of drought-tolerant plants in traditional arid landscapes, termed

“xeriscaping,” has been important to help conserve water resources for homeowners and municipalities in these locations. Recognizing culturally-significant plants are very useful for many conservation practices. For example, sweetgrass is used for Native American ceremonies and crafts, but it is also a native species that can be planted in waterways and riparian buffers to reduce erosion and improve water quality.

Performance Goals

The Plant Materials Program will identify and document multiple uses of plant releases and incorporate this information into NRCS Standards & Specifications and USDA Plant Guides.

The Plant Materials Program will collaborate with external clients to accelerate the use conservation plants to address human concerns, such as drought tolerant species and culturally significant plants.

Objective 3.4 – Increase the use of Career interns to bring new employees into the Program and prepare them for assuming key positions .

Maintaining excellence in the range of needed disciplines may be difficult in the next five years because a significant percentage of the workforce will be eligible to retire in 5 years. Retirees will take with them more than their technical knowledge. The networks they have established with the community and partners will be difficult to replace. This objective addresses the NRCS Strategic Plan Management Goal: Managing Human Capital.

Baseline

In FY2005 the Plant Materials Program hired three career interns to begin to fill the void in training assistant managers within the Program. As the budget permits, the Program must continue to fill vacancies in the Program.

Performance Goals

The Plant Materials Program will fill long term vacancies using career interns and continue to provide needed training to Program staff.